

### **REMARKS/ARGUMENTS**

Claims 1-60 are pending in the present application.

This Amendment is in response to the Office Action mailed May 12, 2006. In the Office Action, the Examiner objected to the Specification and the Drawings. The Examiner further provisionally rejected claims 1-3, 21-23, 41-43 under the judicially created doctrine of obviousness-type double patenting; rejected claims 21-40 under 35 U.S.C. §101; claims 1-60 under 35 U.S.C. §102(b). Applicant has amended the Specification, Figure 14, claims 1, 3, 21, 23, 41, 43, and have canceled claims 2, 22, 42. Reconsideration in light of the amendments and remarks made herein is respectfully requested.

#### ***Drawings***

1. The Examiner objected to Figure 5, block 506; Figure 9, block 916; and Figure 10, block 1010, for including reference characters not mentioned in the description. In response, Applicant has amended the Specification.
2. The Examiner objected to Figure 14, block 1404; Figure 21, block 2114, for not including reference characters mentioned in the description. In response, Applicant has amended the reference numbers in the paragraph starting on page 28, line 24 of Specification so that they correspond to the reference numbers in Figure 21, and has amended Figure 14 as follows:

Figure 14: reference "1408" of block "IS CWM DATA TYPE USER-DEFINED" is changed to "1404".

Therefore, Applicant respectfully requests the objection be withdrawn.

2. The Examiner objected to Figure 14 because the reference character 1408 was used to designate two different blocks. In response, Applicant has amended Figure 14 as described above. Therefore, Applicant respectfully requests the objection be withdrawn.

#### ***Specification***

1. Applicant has amended the Specification to provide the related application serial number. Applicant has also amended the Specification to correct erroneous reference numbers. No new

matter were introduced. Support for the amendments can be found in Figure 5, Figure 9, and Figure 10.

2. In section 5 of the Office action (page 4), the Examiner objected to the specification as being replete with terms that are not clear, concise and exact and stated that the specification should be revised carefully in order to comply with 35 U.S.C. §112, first paragraph. The Examiner cited the following terms as examples of some unclear, inexact or verbose terms used in the Specification: design items, design libraries, design model, subject areas, and generalization.

Applicant respectfully disagrees for the following reasons. The Specification clearly discloses that “the CWM conversion system 45 transforms the logical aspects of the CWM into design items in a design tool for a relational database” (Specification, page 12, lines 10-12) and that the corresponding design items comprise design libraries and the design libraries comprise design models (see, for example, Summary of Invention, Abstract). Since related items with the same names can be found in both the CWM (i.e., the input) and a database design (i.e., the output), a prefix will be added to the names of related items to distinguish them from one another (Specification, page 7, lines 3-5). Only the ER (i.e., logical) and the relational (i.e., physical) models are used as inputs. To retain clarity in the description, items in the CWM are referred to as ER <name> for items in logical aspects, or relational <name> for items in physical aspects. Some items from the CWM that are common to both ER and relational worlds will be prefixed by CWM. For the output, logical elements typically found in design tools with logical modeling support will be referred to as design <name>. Physical elements typically found in a DBMS or in the physical modeling of DBMS provided in database design tools will be referred to as DBMS <name>. (Specification, page 7, lines 17-25). The terms “libraries”, “model”, “subject areas”, and “generalization” considered by the Examiner as unclear, inexact or verbose are in fact well-known to one skilled in the art of modeling, and are defined and used throughout the specification of the CWM standard (for example, version 1.0, October 2001) published by the Object Management Group (OMG). See, for example, Figure 1.1 (Entity Relationship) at this OMG weblink:

<http://www.omg.org/docs/formal/01-10-31.pdf>

<http://www.omg.org/docs/formal/03-03-29.pdf>

Patent documents are written for persons familiar with the relevant field; the patentee is not required to include in the specification information readily understood by practitioners, lest every patent be required to be written as a comprehensive tutorial and treatise for the generalist, instead of a concise statement for persons in the field. Verve LLC v. Crane Cams Inc., 311 F.3d 1116, 65 USPQ2d 1051, 1053-54 (Fed. Cir. 2002).

Therefore, Applicant submits that the Specification is written in “full, clear, concise, and exact terms”, in accordance with the requirement of 35 U.S.C. §112, first paragraph. Accordingly, Applicant respectfully requests the objection under 35 U.S.C. §112, first paragraph, be withdrawn.

### ***Double Patenting***

The Examiner provisionally rejected claims 1-3, 21-23, and 41-43 under the judicially created doctrine of obviousness-type double patenting, as being unpatentable over claims 1-3, 13-17, and 27-29 of co-pending Application No. 10/716,286.

In response, Applicant is filing concurrently a terminal disclaimer in compliance with 37 CFR 1.321(c) to overcome the provisional rejection.

However, Applicant respectfully disagrees with the Examiner that claims 1-3, 13-17, and 27-29 of co-pending Application No. 10/716,286 recite all the elements of claims 1-3, 21-23, and 41-43 of the present application (Office action, page 5, lines4-6). Claims 1-3, 13-17, and 27-29 of co-pending Application No. 10/716,286 might render obvious but do not anticipate claims 1-3, 13-17, and 27-29 of the present application.

### ***Rejection Under 35 U.S.C. § 101***

In the Office Action, the Examiner rejected claims 21-40 under 35 U.S.C. §101 as being unpatentable because the claimed invention is directed to non-statutory subject matter.

Specifically, the Examiner states that the claim recites “a machine-accessible medium” and this includes transmission medium. The Examiner states that “implementing the claim

would render the result of the claim as intangible”, that “[a] signal-bearing medium is not tangible, and cannot tangibly embody a computer program or process since a computer cannot understand/realize (i.e., execute) the computer program or process when embodied on the data signal”, and concludes that “a data signal does not meet the “useful, concrete, and tangible” requirement. Applicant respectfully disagrees.

The Examiner has not proved that an electromagnetic medium such as an RF link is not tangible. A RF refers to that portion of the electromagnetic spectrum in which electromagnetic (EM) waves can be generated by alternating current fed to an antenna. An electromagnetic wave carries energy and momentum which may be imparted when it interacts with matter. An EM wave may consist of particles called photon. These elements are clearly tangible and concrete. They do not merely represent a form of energy.

It appears that the Examiner is already applying the interim examination guidelines **recently proposed and still under evaluation**, by the USPTO that characterize signal claims as non-statutory subject matter. The USPTO argues that a signal is not a process, composition of matter, machine, or article of manufacture. The signal has “no physical structure” and does not “itself perform any useful, concrete, and tangible result” and therefore is a non-statutory natural phenomenon. “These interim guidelines propose that such signal claims are ineligible for patent protection because they do not fall within any of the four statutory classes of Sec. 101. Public comment is sought for further evaluation of this question.” See Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility, 1300 OG 142 (November 22, 2005).

This proposed USPTO interim guideline on signal claims is still being evaluated, with public comment being sought for the evaluation. Applicant does not agree with the USPTO’s proposition that an electromagnetic signal does not have a physical structure and does not itself perform a useful, concrete, and tangible result. This type of signal does have a physical structure though not visible to the naked eye and does itself perform a useful, concrete, and tangible result.

Before the publication of this **proposed** interim guideline, training materials distributed by the USPTO to teach how to use the examination guidelines for computer-related inventions in effect since March 29, 1996 (MPEP, Chapter 21, section 2106) included a signal claim example listed as Example 13 under Automotive Manufacturing Plant. The claim example was “A

computer data signal embodied in a carrier wave comprising a compression source code segment comprising [the code]; and an encryption source code segment comprising [the code].” The example was accompanied by an analysis of the claim and the signal claim was determined to be statutory subject matter. Furthermore, in Appeal No. 2002-1554 in the case of *Ex parte Rice* (Application 08/003,996), the Board of Patent Appeals and Interferences reversed an examiner’s rejection of signal claims as being directed to non-statutory subject matter under 35 U.S.C. §101, holding that electromagnetic signals, although “transitory and ephemeral in nature”, are statutory subject matter.

Although Applicant disagrees with the Examiner’s rejection of claims 21 under 35 U.S.C. §101, the rejection being based on the currently proposed USPTO interim guideline, Applicant has amended claim 21 to limit claims 21 to machine-accessible storage medium in order to obtain a timely Notice of Allowance.

Accordingly, Applicant submits that amended claim 21 and its dependent claims are statutory under 35 U.S.C. §101 and respectfully requests the rejection be withdrawn.

### ***Rejection Under 35 U.S.C. § 102(b)***

The Examiner rejected claims 1-60 under 35 U.S.C. §102(b), as being anticipated by a non-patent literature titled “Designing and Creating Relational Schemas with a CWM-Based Tool” by Kumpon Farpinyo *et al* (“Farpinyo”). Applicant respectfully traverses the rejection and submits that the Examiner has not met the burden of establishing a prima facie case of anticipation.

Farpinyo discloses that a tool called ER2CWM can create CWM relational database schemas from physical data models represented by ER diagrams (Abstract), but does not disclose the methodology. Farpinyo considers only the part of CWM for relational database schemas called CWM Relational (Farpinyo, page 456, last 2 lines). As well known in the art, CWM Relational is the part that contains the physical information. Refer, for example, to this OMG weblink:

<http://www.omg.org/docs/formal/03-03-29.pdf>

Farpinyo discloses that the tool ER2CWM uses the CWM Relational, i.e., the physical aspects of CWM, to create CWM relational database schemas. However, Farpinyo does not

teach how the transformation from the physical aspects of CWM to the relational database schemas is carried out. In other words, Farpinyo does not teach any of the elements of the amended claims 1, 21, 41. The User Manual cited by the Examiner only discloses how to use this ER2CWM to create ER diagram, to create a database, to read a schema, to create ER diagram from Metadata CWM, etc. It does not disclose how the transformation from the physical aspects of CWM to the relational database schemas is done.

To anticipate a claim, the reference must teach every element of the claim. "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." Vergegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ 2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the...claim." Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 USPQ 2d 1913, 1920 (Fed. Cir.1989). Since the Examiner failed to show that Farpinyo teaches or discloses any of the elements of the claims, the rejection under 35 U.S.C. §102 is improper.

Therefore, Applicant submits that amended independent claims 1, 21, and 41 and their respective dependent claims are distinguishable over the cited prior art references. Accordingly, Applicant respectfully requests the rejection under 35 U.S.C. §102(b) be withdrawn.

**Conclusion**

Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

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Dated: October 12, 2006

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